Amendment to the Specification

Please replace paragraph [0016] with the following amended paragraph:

[0016]   As shown in FIG. 1, a hologram of the item to be displayed is generated by the output imager 8. For example, a keyboard can be generated. The interference pattern required for the object to be generated is created by the analysis engine 17, or learned and stored in the analysis engine 17 by showing the sensor 13 the item in holographic recording mode. The generated image is seen by the solid state sensor 13. That is, the item is "generated" by the display 8, and "seen" by the sensor 13. The interference pattern as seen by the sensor 13 (generated by the imager 8) is the same nominal pattern as was used to generate the image. ~~An~~ A computer comprising an analysis engine 17 will compare these images (the pattern used to create the image vs. the actual sensed pattern of the image) and find no significant difference. The comparison can be done in feature space (analysis of the transform of the pattern into image components) or as a global comparison (bit mapping one pattern against the other). The analysis engine 17 can be microprocessor based, a hard wired circuit, or any of a number of tools used for this type of image or pattern analysis. The imager 8 may be, for example, a reflective solid state imaging device or a transmissive solid state imaging device. The waves generated by the imager may be in the visible or invisible spectral range. The sensor 13 may be a solid state sensing device, and may be specifically balanced for a spectral range corresponding to the waves generated by the imager 8.

Please replace paragraph [0019] with the following amended paragraph:

[0019]   In addition, the template image 9 can be modified to respond to the user's interactions. For example, in the case of the keyboard, the keyboard image can be reconfigured such that the key that the user "pressed" will now be changed in the image to represent a pressed position. A "virtual steering wheel" might move with the user turning the wheel to steer. Any number of interaction scenarios can be conceived and implemented. For example, the image may represent an input terminal, a keyboard, a pointing device, a game, a musical instrument. The device 8 may also comprise an interface (not shown) for connecting the device 8 to a computer (not shown), such that data representing the movement and position of the object (e.g., a finger or hand of the user, or a pointer) can be transferred from the device 8 to the computer via the interface. The interface may be hard wired or wireless. For a wireless interface, an infrared, RF or microwave wireless interface may be used.